What is claimed is:

1. A composition comprising

(i) a minor amount of a binder and

(ii) a major amount of spherical inorganic matrix particles.

2. The composition of claim 1 comprising the inorganic particles and the binder in a weight ratio of about 100 : 10 to about 100 : 0.1.

3. The composition of claim 1 comprising the inorganic matrix particles and the binder in a weight ratio of about 100 : 8 to about 100 : 1.0.

4. The composition of claim 1 comprising the inorganic matrix particles and the binder in a weight ratio of about 100 : 8 to about 100 : 3.5.

5. The composition of claim 1 wherein the binder is selected from the group consisting of organic polymers and alkali silicates.

6. The composition of claim 5 wherein the organic polymer binder is selected from the group consisting of thermoplastic polymers.

7. The composition of claim 5 wherein the organic polymer binder is selected from the group consisting of cured polymer.

8. The composition of claim 5 wherein the alkali silicate is selected from the group consisting of sodium-water glasses, potassium-water glasses and mixtures thereof.

9. The composition of claim 6 wherein the thermoplastic organic binder polymer is selected from the group consisting of polyether-ether-ketones (PEEK), polyvinylchloride (PVC), polypropylene (PP), polyethylene (PE), acrylnitrile-butadiene-styrene-copolymers (ABS), polycarbonates (PC), polymethylmethacrylate (PMMA), polyvinylidenfluoride (PVDF) and thermoplastic polyolefins (TPO).

10. The composition of claim 7 wherein the cured polymer is selected from the group consisting of epoxy resins, polyurethane (PU) resins, alkyd resins, unsaturated polyester (UP) resins, melamine resins, vinylester resins, acrylate resins and phenolic resins.

11. The composition of claim 1 wherein the inorganic spherical matrix particles are made of a material selected from the group consisting of aluminium, copper, iron, steel, titanium, platinum, manganese, zinc, bronze and other metal alloys, coal, glass, ceramic, quartz, silica, silicon carbide, tungsten carbide, boron carbide, metakaolin, calcinated clay, chinese clay, calcium carbonate, barium sulfate, aluminium oxide, and magnesium oxide.

12. The composition of claim 1 wherein the spherical inorganic matrix particles have a mean particle diameter of from about 5 to about 80 µm.

13. The composition of claim 1 wherein the spherical inorganic matrix particles have a mean particle diameter of from about 10 to less than about 50 µm.

14 The composition of claim 1 wherein the spherical inorganic matrix particles have a mean particle diameter of from about 25 to about 40 µm.

15. The composition of claim 1 wherein at least about 80 wt-% of the spherical inorganic matrix particles have a particle size which does not deviate more than about 15 % from the average particle size.

16. The composition of claim 1 wherein at least about 85 wt-% of the spherical inorganic matrix particles have a particle size which does not deviate more than about 15 % from the average particle size.

17. The composition of claim 1 wherein at least about 98 wt-% of the spherical inorganic matrix particles have a particle size which does not deviate more than about 15 % from the average particle size.

18. The composition of claim 1 further comprising a chemical foaming agent.

19. The composition of claim 18 wherein the chemical foaming agent is selected from the group consisting of NH_4HCO_3 and $Ca(H_2PO_4)_2$.

20. The composition of claim 18 wherein the chemical foaming agent is present in an amount of from about 0.1 to about 2 % by weight, based on the total amount of the composition.

21. The composition of claim 18 wherein the chemical foaming agent is present in an amount of from about 0.1 to about 1 % by weight, based on the total amount of the composition.

22. A porous shaped article comprising

(i) a minor amount of a binder and

(ii) a major amount of spherical inorganic matrix particles.

23. The porous shaped article of claim 22 having a structured surface.

24. The porous shaped article of claim 22 being a mold.

25. The porous shaped article of claim 22 comprising the inorganic particles and the binder in a weight ratio of about 100 : 10 to about 100 : 0.1.

26. The porous shaped article of claim 22 comprising the inorganic matrix particles and the binder in a weight ratio of about 100 : 8 to about 100 : 1.0.

27. The porous shaped article of claim 22 comprising the inorganic matrix particles and the binder in a weight ratio of about 100 : 8 to about 100 : 3.5.

28. The porous shaped article of claim 22 wherein the binder is selected from the group consisting of organic polymers and alkali silicates.

29. The porous shaped article of claim 22 wherein the binder is an organic polymer and is selected from the group consisting of thermoplastic polymers.

30. The porous shaped article of claim 22 wherein the binder is selected from the group consisting of cured polymers.

31. The porous shaped article of claim 28 wherein the alkali silicate is selected from the group consisting of sodium-water glasses, potassium-water glasses and mixtures thereof.

32. The porous shaped article of claim 28 wherein the thermoplastic organic binder is a thermoplastic organic polymer and is selected from the group consisting of polyether-ether-ketones (PEEK), polyvinylchloride (PVC), polypropylene (PP), polyethylene (PE), acrylnitrile-butadiene-styrene-copolymers (ABS), polycarbonates (PC), polymethylmethacrylate (PMMA), polyvinylidenfluoride (PVDF) and thermoplastic polyolefins (TPO).

33. The porous shaped article of claim 30 wherein the cured polymer is selected from the group consisting of epoxy resins, polyurethane (PU) resins, alkyd resins, unsaturated polyester (UP) resins, melamine resins, vinylester resins and acrylate resins and phenolic resins.

34. The porous shaped article of claim 22 wherein the inorganic spherical matrix particles are made of a material selected from the group consisting of aluminium, copper, iron, steel, titanium, platinum, manganese, zinc, bronze and other metal alloys, coal, glass, ceramic, quartz, silica, silicon carbide, tungsten carbide, boron carbide, metakaolin, calcinated clay, chinese clay, calcium carbonate, barium sulfate, aluminium oxide, and magnesium oxide.

35. The porous shaped article of claim 22 wherein the spherical inorganic matrix particles have a mean particle diameter of from about 5 to about 80 µm.

36. The porous shaped article of claim 22 wherein the spherical inorganic matrix particles have a mean particle diameter of from about 10 to less than about 50 µm.

37. The porous shaped article of claim 22 wherein the spherical inorganic matrix particles have a mean particle diameter of from about 25 to about 40 µm.

38. The porous shaped article of claim 22 wherein at least about 80 wt-% of the spherical inorganic matrix particles have a particle size which does not deviate more than about 15 % from the average particle size.

39. The porous shaped article of claim 22 wherein at least about 85 wt-% of the spherical inorganic matrix particles have a particle size which does not deviate more than about 15 % from the average particle size.

40. The porous shaped article of claim 22 wherein at least about 98 wt-% of the spherical inorganic matrix particles have a particle size which does not deviate more than about 15 % from the average particle size.

41. The porous shaped article of claim 22 made from a mixture which further comprises a chemical foaming agent.

42. The porous shaped article of claim 41 wherein the chemical foaming agent is selected from the group consisting of NH_4HCO_3 and $Ca(H_2PO_4)_2$.

43. The porous shaped article of claim 41 wherein the chemical foaming agent is present in an amount of from about 0.1 to about 2 % by weight, based on the total amount of the composition.

44. The porous shaped article of claim 41 wherein the chemical foaming agent is present in an amount of from about 0.1 to about 1 % by weight, based on the total amount of the composition.

45. A method of making a porous shaped article comprising the steps of

- mechanically mixing
  - (i) a minor amount of a binder, and
  - (ii) a major amount of spherical inorganic matrix particles ,
- forming the mixture into the desired shape,
- and exposing it for a time and at a temperature sufficient to solidify the mixture.

46. The method of claim 45 comprising the steps of

- mechanically mixing a major amount of spherical inorganic matrix particles with a minor amount of a binder selected from the group consisting of
  - (a) particulate organic thermoplastic polymers,
  - (b) liquid organic polymer resins, and
  - (c) aqueous solutions of alkali silicates
- forming the mixture into the desired shape, and
- treating the mixture for a time and at a temperature sufficient to
  - in case of (a), sinter the polymer, or
  - in case of (b), cure the polymer, or
  - in case of (c), harden the mixture.

47. The method of claim 45, wherein the mixture is formed into a mold.

48. The method of claim 45 wherein the mold has a structured surface obtainable by impressing a structured mastermold.

49. The method of claim 46 wherein the treating time is between about 0.5 h and about 30 h.

50. The method of claim 49 wherein the treating time is between about 0.5 h and about 25 h.

51. The method of claim 46 wherein the treating temperature is from between about 20°C and about 400°C.

52. The method of claim 51 wherein the treating temperature is from between about 100°C and about 250°C.

53. The method of claim 46 wherein the mixture is treated by gradually raising the temperature from about 20°C to about 400°C over a period of time from between about 5h and about 30h.

54. The method of claim 53 wherein the mixture is treated by gradually raising the temperature from about 20°C to about 250°C over a period of time from between about 5h and about 20h.

55. The method of claim 45 wherein the mixture comprises the inorganic particles and the binder in a weight ratio of about 100 : 10 to about 100 : 0.1.

56. The method of claim 45 wherein the mixture comprises the inorganic matrix particles and the binder in a weight ratio of about 100 : 8 to about 100 : 1.0.

57. The method of claim 45 wherein the mixture comprises the inorganic matrix particles and the binder in a weight ratio of about 100 : 8 to about 100 : 3.5.

58. The method of claim 45 wherein the mixture comprises a binder selected from the group consisting of organic polymers and alkali silicates.

59. The method of claim 58 wherein the organic polymer binder is selected from the group consisting of thermoplastic polymers.

60. The method of claim 58 wherein the organic polymer binder is selected from the group consisting of cured polymer.

61. The method of claim 58 wherein the alkali silicate is selected from the group consisting of sodium-water glasses, potssium-water glasses and mixtures thereof.

62. The method of claim 59 wherein the thermoplastic organic binder polymer is selected from the group consisting of polyether-ether-ketones (PEEK), polyvinylchloride (PVC), polypropylene (PP), polyethylene (PE), acrylnitrile-butadiene-styrene-copolymers (ABS), polycarbonates (PC), polymethylmethacrylate (PMMA), polyvinylidenfluoride (PVDF) and thermoplastic polyolefins (TPO).

63. The method of claim 60 wherein the cured polymer is selected from the group consisting of epoxy resins, polyurethane (PU) resins, alkyd resins, unsaturated polyester (UP) resins, melamine resins, vinylester resins, acrylate resins and phenolic resins.

64. The method of claim 45 wherein the inorganic spherical matrix particles are made of a material selected from the group consisting of aluminium, copper, iron, steel, titanium, platinum, manganese, zinc, bronze and other metal alloys, coal, glass, ceramic, quartz, silica, silicon carbide, tungsten

carbide, boron carbide, metakaolin, calcinated clay, chinese clay, calcium carbonate, barium sulfate, aluminium oxide, and magnesium oxide.

65. The method of claim 45 wherein the spherical inorganic matrix particles have a mean particle diameter of from about 5 to about 80 μm.

66. The method of claim 45 wherein the spherical inorganic matrix particles have a mean particle diameter of from about 10 to less than about 50 μm.

67. The method of claim 45 wherein the spherical inorganic matrix particles have a mean particle diameter of from about 25 to about 40 μm.

68. The method of claim 45 wherein at least about 80 wt-% of the spherical inorganic matrix particles have a particle size which does not deviate more than about 15 % from the average particle size.

69. The method of claim 45 wherein at least about 85 wt-% of the spherical inorganic matrix particles have a particle size which does not deviate more than about 15 % from the average particle size.

70. The method of claim 45 wherein at least about 98 wt-% of the spherical inorganic matrix particles have a particle size which does not deviate more than about 15 % from the average particle size.

71. The method of claim 45 wherein the mixture further comprises a chemical foaming agent.

72. The method of claim 71wherein the chemical foaming agent is selected from the group consisting of NH_4HCO_3 and $Ca(H_2PO_4)_2$.

73. The composition of claim 71 wherein the chemical foaming agent is present in an amount of from about 0.1 to about 2 % by weight, based on the total amount of the composition.

74. The composition of claim 71 wherein the chemical foaming agent is present in an amount of from about 0.1 to about 1 % by weight, based on the total amount of the composition.

75. A device for conducting a fluid between a space and a duct comprising a porous shaped part comprising

(i) a minor amount of a binder and

(ii) a major amount of spherical inorganic matrix particles

whose surface is porous, at the point where the fluid flows through, and the other surface areas are provided with a fluid-impermeable closing means, which are interrupted by at least one duct connection opening.

76. The device of claim 75 wherein the surface, at the point where the fluid flows through, is structured.

77. The device of claim 75 wherein the porous shaped part is in a form suitable for deep-drawing.

78. The device of claim 75 comprising the inorganic particles and the binder in a weight ratio of about 100 : 10 to about 100 : 0.1.

79. The device of claim 75 comprising the inorganic matrix particles and the binder in a weight ratio of about 100 : 8 to about 100 : 1.0.

80. The device of claim 75 comprising the inorganic matrix particles and the binder in a weight ratio of about 100 : 8 to about 100 : 3.5.

81. The device of claim 75 wherein the binder is selected from the group consisting of organic polymers and alkali silicates.

82. The device of claim 81 wherein the organic polymer binder is selected from the group consisting of thermoplastic polymers.

83. The device of claim 81 wherein the organic polymer binder is selected from the group consisting of cured polymer.

84. The device of claim 81 wherein the alkali silicate is selected from the group consisting of sodium-water glasses, potassium-water glasses and mixtures thereof.

85. The device of claim 82 wherein the thermoplastic organic binder polymer is selected from the group consisting of polyether-ether-ketones (PEEK), polyvinylchloride (PVC), polypropylene (PP), polyethylene (PE), acrylnitrile-butadiene-styrene-copolymers (ABS), polycarbonates (PC), polymethylmethacrylate (PMMA), polyvinylidenfluoride (PVDF) and thermoplastic polyolefins (TPO).

86. The device of claim 83 wherein the cured polymer is selected from the group consisting of epoxy resins, polyurethane (PU) resins, alkyd resins,

unsaturated polyester (UP) resins, melamine resins, vinylester resins, acrylate resins and phenolic resins.

87. The device of claim 75 wherein the inorganic spherical matrix particles are made of a material selected from the group consisting of aluminium, copper, iron, steel, titanium, platinum, manganese, zinc, bronze and other metal alloys, coal, glass, ceramic, quartz, silica, silicon carbide, tungsten carbide, boron carbide, metakaolin, calcinated clay, chinese clay, calcium carbonate, barium sulfate, aluminium oxide, and magnesium oxide.

88. The device of claim 75 wherein the spherical inorganic matrix particles have a mean particle diameter of from about 5 to about 80 µm.

89. The device of claim 75 wherein the spherical inorganic matrix particles have a mean particle diameter of from about 10 to less than about 50 µm.

90. The device of claim 75 wherein the spherical inorganic matrix particles have a mean particle diameter of about 25 to about 40 µm.

91. The device of claim 75 wherein at least about 80 wt-% of the spherical inorganic matrix particles have a particle size which does not deviate more than about 15 % from the average particle size.

92. The device of claim 75 wherein at least about 85 wt-% of the spherical inorganic matrix particles have a particle size which does not deviate more than about 15 % from the average particle size.

93. The device of claim 75 wherein at least about 98 wt-% of the spherical inorganic matrix particles have a particle size which does not deviate more than about 15 % from the average particle size.

94. The device of claim 75 made from a mixture which further comprises a chemical foaming agent.

95. The device of claim 94 wherein the chemical foaming agent is selected from the group consisting of NH_4HCO_3 and $Ca(H_2PO_4)_2$.

96. The device of claim 94 made from a mixture wherein the chemical foaming agent is present in an amount of from about 0.1 to about 2 % by weight, based on the total amount of the composition.

97. The device of claim 94 made from a mixture wherein the chemical foaming agent is present in an amount of from about 0.1 to about 1 % by weight, based on the total amount of the composition.

98. A deep-drawing mold comprising a duct and a shaped porous part comprising

(i) a minor amount of a binder and

(ii) a major amount of spherical inorganic particles,

the surface of which, at the point where the fluid flows through, carries a finely porous surface and on the other surface areas a fluid-impermeable closing means, which are interrupted by at least one duct connection opening.

99. The deep-drawing mold of claim 98 wherein the surface, at the point where the fluid flows through, is structured.